

Title of project:**Statewide Integrated Pest Management In Depth, Hands-on Training for NY Christmas Tree Producers****Project leaders:**

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Abstract:

Producers of conifers in New York, which are used in the Christmas tree and nursery industries, face numerous pest management challenges. From our work with growers over the past several years we have identified and developed expertise on the key insect, disease and weed pests. Through a series of hands-on presentations and on-farm tours this project reached growers and extension educators with integrated pest management techniques for those important pests. Training programs were held throughout NY over the last two years and were well received by growers. Evaluations indicated that 96 % of the participants indicated intent to change a practice based on the new information they learned at the workshop. And of the participants that attended a previous workshop 95% stated they are doing something differently now, as a result of what they picked up at a past program.

Justification:

Evergreen tree farming on nurseries and Christmas tree farms is a multi-million dollar industry in temperate regions of the U.S.; providing trees for decoration and live specimens for transplant. In the most recent USDA Census of Agriculture, NYS is seventh in the U.S. for Christmas tree producers (844 farms) and total trees harvested (348,043 trees); with an estimated farmgate and consumer retail value of \$8.8 and \$14.2 million, respectively. Based on work with the state Christmas tree growers' association, we have found that there is a need, and desire, for continuing education in IPM practices for Christmas trees growers. Grower identified research needs for nurseries also apply to Christmas tree production: weed, disease and insect management, and information on IPM and alternatives to chemicals (NY Farm Viability Institute, 2010). Pre- and post-survey results from a project to identify IPM needs for Christmas tree growers showed that while most growers follow some IPM practices, yet improvements could be made on all farms. The most commonly mentioned areas for which growers would appreciate assistance were scouting, record keeping, pest identification, calibration of pesticide equipment, and timing of pesticide applications. To provide grower education on IPM techniques we have conducted hands-on workshops with greenhouse growers—both on-farm or in conjunction with local Cornell Cooperative Extension offices. For each workshop, educational samples were collected and information gathered to fit the site and the growers' interest. We have found these to be an excellent way to teach IPM practices and to encourage two-way information exchange. Based on our successful experience providing In-depth workshops to Greenhouse growers we launched a multi-year project for Christmas Tree In-depth workshops in 2013 in order to increase their use of IPM.

Procedures:

Our initial activities for this project involved include identifying regions, host growers and Extension educators that were appropriate for the workshops. The Cornell Extension system has been involved to help identify sites (farm or CCE office), advertise to the regional growers, and provide necessary venues, and to assist with equipment, such as microscopes or

projectors. We worked both with Extension educators and growers to identify locations and times to hold the workshops. Attendees were surveyed at the end of each workshop to determine intent to implement what they learned that day. Later growers' surveys will be administered through the web, the mail or by telephone to evaluate if there were changes in IPM practices used. A smaller group of growers will be evaluated to determine if the changes they make result in reduction in pesticide use and reduction in costs of pest control. In the long-term, NY Christmas tree growers will increase their use of IPM management techniques and will reduce the unnecessary or inappropriate use of pesticides for pest management.

In-Depth Workshop Locations and Dates 2013-present:

- Darlings Tree Farm Clifton Springs NY 6/13/2013
- Three B Tree Farm Norfolk, NY 6/26/2013
- Marcus Farms Arkport, NY 7/11/2013
- Goderies' Tree Farm Johnstown, NY 9/20/2014
- Highland Lab Clintondale, NY 7/9/2014
- All Western Nursery Springwater NY 10/17/14

4. Evaluations and Documentation of Change in Practices

A program evaluation was conducted at the conclusion of four of the six workshops.

The majority of the participants (96%) indicated that they learned something at the workshop that they planed to incorporate into their business. Some of specific examples include:

“Leave ladybugs alone”

“How to be aware of insect, fungi and soil problems.”

“Some species should not be planted at my location.”

“Monitoring balsam wooly aphids to determine spray program”

“Effects of improper calibration”

“Impact of pests and weeds”

We also surveyed participants on their participation in previous IPM programs and if they are doing anything different now, based on what they learned at a previous program. From this we learned that 76% had attended a previous IPM educational program and of those an average of 95% reported that they are doing something different based on attending a previous program. Some of the practices they reported as having changed included:

“Scouting more”

“Practice IPM”

“Picking the right tree for the right location”

“Use little pesticide as possible (IPM)”

Pest: any insect pest, any disease pest,

Setting: Christmas tree, Nursery

Management Technique: monitoring, research & education, biological control, resistance.